



## **Weather Reporter: Reducing The Impact Of Severe Weather**

Performance Task

### **Introduction**

Your job as a weather reporter is to study patterns of weather that happen at different times of year. This is to help make predictions about weather that might happen in the future. It is important for you to share this information with the people living in your region so they also know what kinds of weather are possible and how they can stay safe if bad weather happens. You will be helping to educate your school community about the weather and how to prepare. Your goal will be to educate the school community about weather and safety procedures. You will be working as a team of weather reporters that will be reporting the daily weather and researching different types of bad weather that can affect your area. You will help design and organize storm drills that will help prepare your school community to be ready if severe weather were to occur during the school day. It is important to know the weather because it could affect your school day and any after-school activities.

### **Big Idea / Essential Questions**

#### **Big Idea**

- Humans are affected by their environment.
- Data can be collected and used to make predictions.

#### **Essential Questions**

- What predictable patterns of change can be observed on and from earth?
- How are humans affected by their environment?
- What ways can data be collected, displayed and analyzed to make predictions about the future?

### **G.R.A.S.P.**

#### **Goal**

Your goal is to educate the school community on severe weather that can happen in your area. You also need to give them ideas and procedures that can help keep people safe.

#### **Role**

You will serve as weather reporters as well as educators in the school community.

#### **Audience**

Your audience will be the students, staff, and the school community.

**Situation**

Your job as a weather reporter is to study patterns of weather that happen at different times of year. This is to help make predictions about weather that might happen in the future. It is important for you to share this information with the people living in your region so they also know what kinds of weather are possible and how they can stay safe if bad weather happens. You will be working as a team of weather reporters that will be reporting the daily weather and researching different types of bad weather that can affect your area. Your goal will be to educate the school community about weather and safety procedures. It is important to know the weather because it could affect your school day and any after-school activities!

- One web resource containing information about the weather is:  
<http://www.weather.com/> (weather glossary, storm encyclopedia, average temperature and rainfall charts, etc.)

**Products**

**1. Weather Graphs**

As part of your job, you will research the amount of severe weather events (hurricanes, tornadoes, snow storms, flooding etc.) that have happened in your region in each of the 4 seasons. You may use data from a 1, 2 or 3 year period. Create a scaled bar graph for each season showing the number of times each type of severe weather happened. The audience should be able to understand the differences in the number of severe storms and make generalizations about typical weather conditions expected during a particular season from these graphs.

- What are 2 - 3 types of severe weather that happen most often in your region?
- How much data should be collected on severe storms in your region?
- How is a scaled bar graph different from a regular bar graph?

**2. Weather Posters**

Select one type of severe weather that happens often in your region and make a poster about it. Your poster should include your graph and information about why that weather event is dangerous. It should also tell what signs to look for before that weather event and what to do if it occurs.

- What type of severe weather is possible in your area?
- What time of year would this severe weather occur?
- What happens outside when these severe weather events occur?
- How can people stay safe when severe weather occurs?

**Severe Weather Poster - Weather Reporter: Reducing The Impact Of Severe Weather**

Achievement Levels	1	2	3	4
	Poster has no title and very little information about severe	Poster has a title with some information about severe	Poster has a title with information about severe	Poster has a clear title with detailed information about

<b>Achievement Levels</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Severe Weather</b> (x1)	weather, when it is likely to happen, and how to prepare for it.	weather, when it is likely to happen, and how to prepare for it.	weather, when it is likely to happen, and how to prepare for it.	severe weather, when it is likely to happen, and how to prepare for it.
<b>Writing Conventions</b> (x1)	Many errors in spelling or punctuation.	Some errors in spelling or punctuation.	Few errors in spelling or punctuation.	No errors in spelling or punctuation.
<b>Poster Elements</b> (x1)	Important information and pictures are minimally organized on the poster.	Important information and pictures are somewhat organized on the poster.	Important information and pictures are adequately organized on the poster.	Important information and pictures are very organized on the poster.
<b>Research</b> (x1)	Product shows that very little research was done around the topic.	Product shows that some research was done around the topic.	Product shows that adequate research was done around the topic.	Product shows that thorough research was done around the topic.
<b>Weather Hazards</b> (x1)	Product minimally communicates the actions people can take to stay safe and reduce the impact of severe weather.	Product partially communicates the actions people can take to stay safe and reduce the impact of severe weather.	Product adequately communicates the actions people can take to stay safe and reduce the impact of severe weather.	Product communicates the actions people can take to stay safe and reduce the impact of severe weather very clearly.

### 3. Weather Report

Part of your job will be to give the 7-day weather report to your school community. You should prepare an announcement for each morning. This announcement should tell all about the weather of the day - temperature, clouds or sunshine, is any rain, snow, or fog expected and if there is any severe weather expected.

You will also talk about the week ahead. What type of weather is expected? What will be the high and low temperatures each day? What is the difference in temperatures of each day?

Also include the times of sunrise and sunset. How much time will there be sun? How much time is without sun?

To get the information you need for the report, you can visit the website for The Weather Channel here: [The Weather Channel website](https://www.weather.com) or your local news station webpage. Or, you can watch either of these stations on TV.

- Where can you get information on the daily or weekly weather forecast?
- What types of severe weather can happen in your area?
- How will you organize the weather information into a short, focused announcement?

### New Rubric

<b>Achievement Levels</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Climate and Weather</b> (x1)	The product demonstrates very little understanding of the typical weather conditions of the region.	The product demonstrates some understanding of the typical weather conditions of the region.	The product demonstrates understanding of the typical weather conditions of the region.	The product demonstrates strong understanding of the typical weather conditions of the region.
<b>Math Calculations</b> (x1)	Few mathematical calculations are correctly shown and units are accurate.	Some mathematical calculations are correctly shown and units are accurate.	Most mathematical calculations are correctly shown and units are accurate.	All mathematical calculations are correctly shown and units are accurate.

<b>Achievement Time and Time Intervals</b> (x1)	<b>1</b> Very few times or time intervals are shown correctly.	<b>2</b> Some times are correctly shown with correct AM or PM labels. A few time intervals are accurate.	<b>3</b> Most times are correctly shown with correct AM or PM labels. Some time intervals are accurate.	<b>4</b> All times are correctly shown with correct AM or PM labels. All time intervals are accurate.
<b>Informative Speaking</b> (x1)	Limited information is provided.	Partial information is provided that emphasizes important points supported by facts and details.	Adequate information is provided that emphasizes important points supported by facts and details.	Thorough information is provided that emphasizes important points supported by facts and details.

## 4. Weather Drills Calendar

Based on the graphs you constructed, you will create a calendar that tells which safety drills students and teachers will practice in each season. It will be important to do some research on the best ways for students and teachers to protect themselves from harm in the case of severe weather. You can find ideas on safety drills on the internet or by contacting your local police and fire departments.

Once you know which drills you will have the students practice, create a yearly calendar that shows when each drill will be practiced so that the school community is ready in the case of severe weather.

- What types of severe weather can be expected this month in your area?
- What drills should you practice in your school in the event severe weather does occur?
- How can people stay safe when severe weather occurs in your area?

## Weather Drills - Weather Reporter: Reducing The Impact Of Severe Weather

<b>Achievement Levels</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Organization Of Calendar</b> (x1)	Calendar is not very neat and does not have appropriate labels.	Calendar is somewhat neat with appropriate labels.	Calendar is mostly neat with appropriate labels.	Calendar is designed neatly with appropriate labels.
<b>Content</b> (x1)	Calendar has very little information about severe weather, when it is likely to happen, and what drills can be practiced for each type.	Calendar has some information about severe weather, when it is likely to happen, and what drills can be practiced for each type.	Calendar has information about severe weather, when it is likely to happen, and what drills can be practiced for each type.	Calendar has detailed information about severe weather, when it is likely to happen, and what drills can be practiced for each type.
<b>Using Data to Make Decisions</b> (x1)	Student does not use the data collected to help make a decision about when drills should take place.	Student(s) somewhat uses the data collected to decide when drills will take place.	Student(s) uses the data collected to decide when drills will take place.	Student(s) expertly uses the data collected to decide when drills will take place.
<b>Weather Conditions</b> (x1)	Product shows very little understanding that severe weather can happen in patterns and that people can use this information to prepare for it.	Product shows some understanding that severe weather can happen in patterns and that people can use this information to prepare for it.	Product shows understanding that severe weather can happen in patterns and that people can use this information to prepare for it.	Product shows strong understanding that severe weather can happen in patterns and that people can use this information to prepare for it.

## 5. Weather Safety Designs

As part of your job you need to make sure all the people in the school community know

how to stay safe if severe weather happens. But, you also need to help the principal and building engineers learn how to make the building safer for the kids and teachers inside. Based on the type(s) of severe weather that happens most in your area, research some designs that are used to help reduce the impact of that weather on people and the school building. You may see more than one design idea, so decide which idea you think would be best for the school to use.

**\*\*Examples of design ideas could be:** special shutters to cover the windows, heated cables along the roof to melt snow and ice, a garden that absorbs excess flood water etc.

- What kind of weather does your area experience during each season?
- What happens during severe weather events that affect your area?
- How can severe weather affect buildings like homes and schools?
- What designs have been created to lessen the impact of severe weather on buildings and people?

## Weather Presentations - Weather Reporter: Reducing The Impact Of Severe Weather

Achievement Levels	1	2	3	4
<b>Supporting a Claim</b> (x1)	The claim about the best solution for protecting the building and/or school grounds is minimally supported by evidence from research.	The claim about the best solution for protecting the building and/or school grounds is partially supported by evidence from research.	The claim about the best solution for protecting the building and/or school grounds is supported by evidence from research.	The claim about the best solution for protecting the building and/or school grounds is well supported by evidence from research.
<b>Writing Conventions</b> (x1)	Product has many spelling, grammar or punctuation errors.	Product has some spelling, grammar or punctuation errors.	Product has few spelling, grammar or punctuation errors.	Product has no spelling, grammar or punctuation errors.
<b>Support Materials</b> (x1)	Very few materials used in the product support the information being presented.	Some materials used in the product support the information being presented.	Most materials used in the product support the information being presented.	All materials used in the product strongly support the information being presented.
<b>Reducing the Impact of Natural Hazards</b> (x1)	Product shows little understanding that severe weather can happen but that there are specific things people can do to reduce its impacts.	Product shows partial understanding that severe weather can happen but that there are specific things people can do to reduce its impacts.	Product shows adequate understanding that severe weather can happen but that there are specific things people can do to reduce its impacts.	Product shows strong understanding that severe weather can happen but that there are specific things people can do to reduce its impacts.